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ON THE RELATION BETWEEN THE RESPIRATORY AND CIRCULATING FUNCTIONS.

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[Communicated for the Boston Medical and Surgical Journal.—Continued from page 273.]

B. *Imperfect aeration of the blood from disordered function of the organic respiratory nerves.*

The aeration of the blood is immediately dependent upon the nerves distributed to the lungs from the *sympathetic, ganglionic or organic system.* The lungs may be sound and duly filled with air, but still the function of aeration is not performed without the aid of these nerves. A lesion of their function suspends the process of arterialization, notwithstanding the *motions* of respiration are continued, through the influence of the respiratory nerves.

Some degree of the imperfect action of these nerves is very common in typhous and typhoid fevers and other diseases, and especially in erysipelas, scarlet fever, malignant cholera, and some forms of dyspnœa and asthma. It causes the respiration to be frequent, irregular, sighing, and anxious. The patient, while possessed of consciousness, feels the unsatisfying effect of respiration, and often says that his breathing seems to do little good. All the voluntary muscles accessory to respiration are instinctively called into occasional vigorous action; but even after several successive full inspirations, a conscious want of further respiration remains. If this kind of breathing continues, in any aggravated degree, for a considerable length of time, it ordinarily becomes complicated with a torpor of the brain and respiratory nerves, and the patient sinks into a state of asphyxia. This appears to be the most common fatal termination of scarlet fever, erysipelas and other similar diseases.

The asthma with puerile respiration, described by Laennec, affords an example of this imperfect arterialization from disordered function of the organic nerves. "In cases of this kind," says Laennec, "the respiratory sound has resumed all the intensity which it possessed in early infancy; we perceive distinctly the pulmonary expansion taking place with uniformity, completeness, and puerile promptitude, in all the air cells: and yet the patient is oppressed in his breathing, or, in other words, he constantly feels the want of a still more extensive respiration than he enjoys. The lungs, dilated as they are in an extraordinary manner for an adult, nevertheless have not capacity enough to satisfy

the wants of the system. This affection is sufficiently common in persons affected with chronic mucous catarrhs, attended by a copious and easy expectoration. In such cases, the dyspnœa is frequently very intense, and is sometimes so aggravated by the slightest motion, that the patient, though otherwise in pretty good health, is condemned to a life of inactivity, or even to an almost complete state of immobility. Attacks of asthma, however, properly so called, are less frequent in such subjects, than in those affected with the dry catarrh. In these latter cases, the imperfection and small extent of the respiration easily account for the oppressed breathing. But in the others, even during the severest attacks, the completeness with which the respiration is performed is quite astonishing; the sound of it is quite puerile; and, as in the case of a strong and healthy child, we are sensible of the dilatation of the pulmonary cells to their full capacity, and over the whole extent of the chest. Nevertheless, the patient is oppressed, and, as I have already stated, would require a more extensive respiration than his organization allows; in other words, the respiration is very perfect, but the wants of the system in relation to it are increased beyond the standard of health. In such cases it is not in the lungs that we must look for the cause of disease, but in the innervation or nervous influence itself; and this will hold equally good, even if we adopt the chemical theory of respiration, and refer the dyspnœa to an extraordinary want of oxygen in the blood. If a temporary obstruction of the bronchia by a little mucus impedes the transmission of the air to even a small portion of the lungs, the patient experiences an extreme oppression."—*Forbes's Laennec*, p. 412.

It is a fortunate provision of nature, that there is an intimate connection between this set of nerves, and the nerves governing the action of the heart; in consequence of which there is *ordinarily* a relative proportion between the function of arterialization and the motions of the heart. If torpor affects the arterializing nerves of the lungs, it ordinarily affects, at the same time, the nerves of the heart. Hence, while the arterializing function is impaired, the heart sends a moderate quantity of blood to the lungs to be arterialized, the pulse becoming slow and infrequent, or frequent, small and feeble. In the course of typhus, and other fevers, the pulse sometimes becomes extremely infrequent—50, 40, and even 30 in the minute: in some cases this state of the pulse occurs at the onset of the fever.

This infrequent pulse may be owing to a torpor either of the motor respiratory nerves, or of the organic nerves of the lungs. In the former case, the breathing is infrequent, slow and small; the skin livid; and there is listlessness or tendency to coma. When the arterializing nerves are in fault, the skin is livid; but the breathing is full, hurried, irregular, sighing and anxious; and there is wakefulness, extreme mental anxiety, and sometimes delirium, succeeded by coma.

Cholera.—These circumstances are strikingly manifest in malignant cholera. In that disease the morbific cause seems to determine especially to the organic system of nerves. In some cases the process of arterialization seems at once almost wholly suspended—the peculiar

sighing moan, and other symptoms of disordered respiration are observed, and the whole system assumes a livid hue. At the same time the pulse, at first feeble, soon ceases to beat. So far as the influence of the organic nerves extends, life is suspended; while the energy of the brain and medulla oblongata, at least in some degree, remains. Consciousness, volition and respiratory motion continue; but the arterialising function of the lungs and the motions of the heart have ceased. In this state I have seen a patient lie, perfectly pulseless, for more than eight hours, when the functions of organic life gradually revived, and the patient recovered.

Most physicians, like myself, from mistaken views of the pathology of this disease, treated their first cases by attempting to arouse the action of the heart with opium, alcohol and other stimulants. This attempt, in some cases, was too effectual. The heart being excited to action, the blood is thrown to the lungs, from which it returns unarterialized to the heart; the left ventricle now contracts, and sends the black blood, with its usual deadening influence, to the brain and whole system supplied by the arteries; insensibility and coma ensue, and the patient dies asphyxied. Life may continue some time with a total stoppage of the circulation; but it is soon extinguished by a circulation of black blood in the arteries.

SYMPATHY BETWEEN THE DIFFERENT NERVES CONCERNED IN RESPIRATION.

Such is the sympathy between the different nerves concerned in respiration, that there is rarely disordered function in one class of nerves, without some degree of similar disorder in the other class. In the diseases which have been adverted to, as examples of the disordered function of each class of nerves, commonly all of the nerves concerned in respiration are, in some degree, similarly affected. In typhous fever, for instance, the torpor of the motor respiratory nerves is commonly the more prominent, but there is ordinarily also some degree of torpor in the organic nerves; and in many cases it is not easy to decide whether one or the other class is the more affected. If disease commences with torpor of the organic nerves, the consequent imperfect aeration of the blood ordinarily soon occasions torpor of the motor nerves, by the paralyzing influence of the black blood.

Many diseases, besides those already adverted to, are commonly attended with deficient aeration of the blood. Dr. Stevens, for many years a distinguished practitioner in the West Indies, has particularly noticed the dark color of the blood in *yellow fever*, and some other diseases of tropical climates. Dr. Daniell has made similar observations in the *autumnal fevers* of Savannah. In *dyspepsia*, *hypochondria*, and some forms of *mania*, it may ordinarily be observed. From obvious causes it occurs in *croup*, and other diseases in which there is obstruction of the air passages. All fevers of a typhoid character are commonly attended with this condition of the blood; and indeed there are few diseases in which it may not occasionally occur.

From the preceding considerations it may be observed, that imperfect aeration of the blood is occasioned by various causes. Attentive ob-

servation of the symptoms in particular cases is requisite to ascertain whether there is any mechanical impediment to the expansion of the chest, or whether the fault is in the air passages, the lungs, the motor respiratory nerves, the respiratory muscles, or the organic nerves of respiration. A correct diagnosis in regard to these circumstances is highly important in a therapeutic point of view.

THERAPEUTIC INDICATIONS.

It is doubtful whether, in any disease, an *excessively aerated condition of the blood* is a prominent morbid feature. I suspect that such a condition sometimes occurs, dependent upon irritative excitement of the organic nerves, in erysipelas, scarlet fever, and some other diseases; but, if so, this state ordinarily is soon followed by collapse, with imperfect arterialization. On the contrary, there are few diseases in which *deficient arterialization* does not sometimes occur. Bichat considered it as by far the most common immediate precursor and cause of death; and I think it has been rendered evident, in the preceding part of this essay, that such a condition of the blood has some degree of injurious influence, in various stages, and sometimes throughout the progress, of many diseases.

The general therapeutic indication, therefore, connected with the relation between the respiratory and circulating functions, is *to promote the arterialization of the blood*, or, in other words, to remedy deficient respiration.

Contra-indications in cases of deficient respiration.

Stimulants, which ordinarily operate to increase the action of the heart, without a corresponding increase of the respiration, should be withheld, or given with extreme caution, when the blood is imperfectly arterialized. From erroneous pathological views, much injury is done, in such cases, with this class of remedies. The deleterious effects of such medication in cholera have been already adverted to; and the same remarks are applicable to cases generally in which the respiration is in a diminished proportion to the pulse. The paralyzing influence of the imperfectly aerated blood occasions a torpor of the whole system. The heart becomes affected with this torpor, and the feeble, small, and sometimes slow, imperfect pulse seems to indicate debility of this organ. It is, however, a torpor or oppression, rather than the debility of exhaustion; the respiration is inadequate to produce that change in the blood which renders it fit fully to support the vitality of the organs to which it circulates; there is already more blood circulating through the lungs than they can arterialize. Under these circumstances, *alcohol* and *fermented liquors*, *opium*, *quinine*, *serpentaria*, and all articles which operate to increase the action of the heart, more than that of the lungs, may have a most injurious effect. By transmitting an additional quantity of blood to the already over-burdened lungs, they cause the whole mass of blood in the system to become more deteriorated, and thus add to the torpor which occasions the apparent debility. Such effects are too frequently produced in the progress of typhous fever, typhoid pneumonitis, and other diseases, especially in the last moments of life.

☞ We will suppose a case of pneumonitis, in which during the progress of the disease one half of the lungs has been obstructed by engorgement. The pulse has been about 90, the respiration 35 or 40. The respiration has been thus frequent, because one half of the lungs has had to perform the whole office of arterialization; yet the tumid, purple lips, the general lividity of skin, and some cerebral oppression, have shown that, with this forced effort, the respiration still has been deficient. At length—commonly on the sixth day—there is an effort towards a crisis. There is as yet little if any resolution of the engorgement within the lungs; but there is increased secretion from the bronchial membrane, while the secretions of the system generally are beginning to be unlocked. The lungs, almost suffocated by the bloody mucus poured out into the bronchia, are struggling with increased effort to perform their office. All the accessory, as well as ordinary muscles of respiration, are engaged in agonizing labor to aerate the blood. But the lividity of skin has increased, and the brain, rendered torpid by the black blood circulating in its arteries, scarcely allows the aid of the will to sustain the respiratory efforts. Under these circumstances active stimulants are administered for the purpose of supporting the sinking powers of life. The action of the heart is excited, and the blood is hurried through the lungs, at once overwhelming the exhausted respiratory powers. For a few moments the system appears to make a renewed struggle to relieve itself of the suffocating oppression; but coma comes on; the respiration, becoming feebler and shorter, soon stops; and the heart, "the ultimum moriens," after a few more feeble, irregular pulsations, yields under the deadening influence of the black blood.

Cases of the above description are not uncommon; and a less degree of the injurious effects of such stimulants, given in the progress of fevers attended with deficient respiration, it is believed, is one of the most common errors of medical practice.

Yet there are cases of deficient respiration—cases attended with absolute debility or atony—which are benefited by these remedies. Coma even sometimes is relieved by full doses of opium; and in small doses opium and other stimulants often may be serviceable in absolutely atonic cases. Their operation, however, should be carefully watched; and if they increase the action of the heart, without a corresponding increase of the respiratory function, the operation will be injurious.

A nutritious diet, by invigorating the circulation, and increasing the quantity of blood; and *muscular exercise*, by hurrying the circulation, commonly have an injurious effect, in cases of this comparative infrequency of respiration.

This disparity between the respiration and pulse is aggravated also by *remedies which operate directly to diminish the frequency of respiration.* Most of the *narcotics*, given in full doses, so as to affect the brain, producing vertigo, drowsiness, or coma, have this effect by inducing torpor of the brain and respiratory nerves; and some of them in moderate doses have a similar operation.

Strychnine in large doses occasions the respiration to be remarkably slow, irregular and infrequent; while in moderate doses it sometimes

improves the respiratory function. I am now treating a gentleman for paralysis of the portio dura with this remedy, in whom one sixth of a grain four times a day produces formication, slight pricking pains, and frequent spasmodic twitching of the muscles. While under this operation, the ratio between the respiration and pulse is about 1 to 7 or 8; though the patient has the ordinary healthy ratio, 1 to 4½, when not under the influence of medicine. In this case, however, the strychnine does not appear to occasion a deterioration of the blood proportionate to the diminished frequency of respiration; and in less doses it is a useful remedy for deficient arterialization depending on a torpor of the organic nerves. In such cases it appears to have an exciting operation on the arterializing nerves, as might be inferred from its efficacy in some forms of asthma and dyspnœa, in which a torpor of these nerves is manifested.

By a similar operation, as before remarked, alcohol, opium, and the exciting narcotics generally, in small doses, sometimes have a favorable effect. Their general exciting operation may be determined especially to the organic nerves of the lungs, or to the brain and motor respiratory nerves, occasioning the breathing to be more full and easy, and the blood to be more perfectly aerated. In some epidemics these effects are so uniform that the physician learns to prescribe such remedies in particular cases, with almost perfect confidence. Aside from the observation of epidemic peculiarities, however, and a consideration of the attending general debility, I know not what general rules can be given to enable a practitioner to calculate on a favorable operation of such remedies, in cases of imperfect arterialization of the blood. As before observed, when used in such cases their operation should be carefully watched; and if they are found to excite the circulatory more than the respiratory function, their operation will be injurious.

Remedies which promote the arterialization of the blood.

These are,

1st. Remedies which diminish the action of the heart and arteries.

2d. Remedies which excite and invigorate the motor respiratory nerves.

3d. Remedies which excite and invigorate the arterializing nerves of the lungs.

4th. Ventilation.

5th. Remedies which obviate mechanical impediment to the respiration.

6th. Remedies which excite secretions vicarious of respiration.

1st. *Remedies which diminish the action of the heart and arteries.*

These remedies obviate a disparity between the two functions by reducing the circulation to a proportion with the respiration. The *antiphlogistic* medicines generally belong to this class.

Venesection is one of the most important of this class of remedies. If the pulse is frequent, full and strong, with a comparative infrequency of the respiration; or, as occurs in pneumonitis, pleuritis, bronchitis, and some other diseases, if the respiration is frequent, but still inadequate to a due aeration of the blood, there can be no question as to the

propriety of bleeding to reduce the circulation. There are other cases, equally requiring bleeding, in which the indications are less obvious. Imperfect respiration, by producing torpor of the heart and arteries, through the ordinary influence of the black blood, may render the pulse infrequent, slow and feeble. This constitutes what is called the *oppressed, depressed,* or *obstructed pulse.*

This oppressed pulse is common in the congestive variety of typhous fever, in some forms of pneumonitis, and in other diseases. When a vein is opened, the blood runs slowly, and has almost a tarry consistence and color; but as the circulation becomes relieved, and the process of aeration is better performed, the blood assumes a florid appearance, and runs freely. This change in the blood takes place more suddenly when some degree of fainting occurs during bleeding, to check or suspend the heart's action; hence when the principal object of bleeding is to restore the balance between the respiration and the pulse, and promote the aeration of the blood, it is well to encourage fainting by bleeding in an erect posture.

The oppressed pulse may occur in a highly inflammatory, or a low typhous or typhoid condition of the system. In both these conditions, bleeding tends to restore the balance between the respiration and the pulse. In the former, bleeding is required not only to reduce the pulse to a proportion with the respiration, but also to subdue inflammation—the pulse rises in fullness and strength, as the oppressing effects of the black blood are removed; and the bleeding may be continued freely. In a low typhoid case, only one of these objects is to be accomplished by bleeding, which should be stopped as soon as faintness is induced, or the blood assumes a florid, arterialized appearance; or, if possible, the disparity between the respiration and the pulse should be obviated by other means without bleeding.

Antimony has a striking effect in diminishing the action of the heart, without producing a corresponding diminution of the respiration. In cases of inflammatory excitement it is useful in reducing arterial action, but it is particularly useful when such excitement is connected with deficient respiration.

This affords one reason for its efficacy in pneumonitis, in which this remedy has been employed successfully in frequent large doses, by Rasori, Laennec, and other modern writers. In this disease, the refrigerant and alterative powers of the remedy have a favorable operation, in reducing and resolving inflammation; but I have found it especially adapted to those cases in which the symptoms of deficient arterialization are prominent—when the respiration is infrequent and small, the skin livid, and the cerebral powers oppressed. Laennec observed patients, in this disease, to recover their consciousness under the use of this remedy; and he advises a persevering employment of it when "the oppression is great, or the head affected."

Dr. Thomas Marryatt, of Bristol, England, who published a treatise on therapeutics, in 1788, gave tartar emetic successfully in fever and in pleurisy. "I have seen many instances," he observed, "wherein a paper has been given every three hours [gr. x. in six papers], without

the least sensible operation, either by sickness, stool, sweat, or urine; and, though the patients had been unremittingly delirious for more than a week, with subsultus tendinum, and all the appearances of hastening death, they have perfectly recovered without any other medical aid—a clyster every other day excepted."

Laennec found tartar emetic successful in hydrocephalus [cerebral congestion?], supervening "in the course of continued fever," and "general debility"—also "in nervous affections connected with a congested state of the brain or spinal marrow."

Dr. Graves employs this remedy in delirium tremens, and "with very remarkable success at various periods of fever, but principally towards its termination." In the low stages of spotted fever, when the symptoms denoted "a combination of primary general nervous excitement with a secondary cerebral congestion," he found a combination of tartar emetic with laudanum very successful. "This method," he observes, "has manifestly saved many, many lives, under a combination of circumstances apparently hopeless."—*Graves's Clinical Lectures.*

In the low stages of many febrile diseases, opium may be given advantageously in combination with antimony, when it could not be given alone, without danger of producing cerebral congestion. The opium allays nervous irritation, exercises its general stimulant operation, and thus sustains the powers of life; while the antimony, by preserving the balance between the respiratory and circulating functions, and thus promoting the arterialization of the blood, prevents the congesting effects of the opium.

Ipecac, like antimony, operates to diminish the force and frequency of the heart's action, and thus obviates a disparity between the respiratory and circulating functions. It is less powerful than antimony; but is appropriate to some cases, in which the more debilitating effects of antimony might be injurious.

The *refrigerant salts*, nitrate of potassa, bitartrate of potassa, sulphate of magnesia, sulphate of soda, &c., reduce the circulation, and in appropriate cases thus have a favorable effect in equalizing the respiratory and circulating functions.

In the use of antiphlogistic remedies, for the purpose under consideration, the *general tone of the system* is to be observed; and in low atonic cases caution is required, lest their general debilitating effects shall more than counterbalance the advantage of equalizing the respiratory and circulating functions. In low stages of typhous fever, for instance, these remedies sometimes may be required for this purpose; but as it is important, in such cases, to avoid the occasion of debility and exhaustion, it is desirable to equalize the functions by other means; and when debilitating antiphlogistics are employed, their operation should be continued no longer than necessity requires.

Digitalis is well known to possess the property of diminishing the frequency and force of the pulse in a remarkable degree. It sometimes has a similar effect on the respiration, especially in large doses, but not in proportion to its effect on the pulse. By virtue of this operation, it is often useful in typhus, pneumonitis, erysipelas, scarlet fever, and other

diseases, and particularly in congestive fevers. It relieves morbid wakefulness, subsultus tendinum, muttering delirium and coma; and sleep induced by it is commonly more refreshing than when induced by opium and most other narcotics.

In a former part of this essay, the remarkable deficiency of respiration which occurs in *delirium tremens* has been noticed; and the success with which I have treated this disease, principally with digitalis, induces me briefly to describe my general plan of treatment. In 1820, Dr. A. L. Peirson, of Salem, Mass. (New Eng. Jour. of Med. and Surg., Vol. IX.), recommended digitalis in the treatment of this disease. After bleeding, he gave the tincture, in doses of seventy-five drops, every two hours. Several years since, owing to epidemic constitutional changes or some other reason, I observed that opium was less successful in this disease, than it had formerly been in my practice; and I was induced to make trial of the digitalis. I commence the treatment of a case with a full cathartic dose of calomel, which is followed with the exhibition of nitrate of silver,* in doses of gr. 1-8, every hour, or gr. 1-4 every two hours. If called in the early part of the day, I adopt no direct means for inducing sleep until night—the natural time for sleep. In the evening I direct one ounce of tincture of digitalis, of which a third part is to be given every two hours until sleep is induced. If this fails, the nitrate of silver is resumed and continued through the following day; and on the following night an ounce and a half of the digitalis is directed, one third to be given every two hours. In a great proportion of cases sleep is induced, and the disease suspended, the first night; and it is very rare that the wakefulness continues through two nights. In most cases no other remedies are used; though sometimes, in connection with them, I direct castor, artificial musk, camphor, or some bitter infusion, with a blister to the back of the neck, or a wash of tincture of cantharis and aqua ammoniæ to the scalp. In a few cases the digitalis has been rejected from the stomach, when I have directed smaller doses at shorter intervals. Of more than 50 cases, treated on this general plan, only four have been fatal. One had been tampered with by a quack, before I was called; the second was complicated with a severe pneumonitis affecting both lungs; the third came on in the course of a severe dysentery—sleep was induced, but the patient sank, after two weeks, with the dysenteric symptoms; the fourth was complicated with erysipelas affecting the face and head, and terminated fatally on the ninth day. In the latter three cases, death appeared to be owing less to the delirium tremens, than to the diseases with which it was complicated.

Ergot has even greater efficacy than digitalis in depressing the circulation. In doses not sufficient to produce any violent effects, it will reduce the healthy pulse from 70 to 50 or even 40 in a minute. But at the same time it depresses the respiration. While digitalis affects the motor nerves of the heart more than it does the respiratory nerves, ergot affects both, and in most cases the respiratory nerves chiefly. When the object is simply to diminish the action of the heart, as in active and irritative hemorrhages, I have found this remedy incomparably more valua-

* For the writer's views of the medicinal properties of this remedy, see subsequent part of this essay.

ble than any other; but on account of its depressing the respiratory motions, it is decidedly injurious in cases of deficient arterialization; and it is noticed, in this place, only to contrast its powers with those of digitalis.

Sanguinaria Canadensis in its medicinal effects is considerably allied to digitalis. It is narcotic and alterative. By its narcotic operation it diminishes the frequency and force of the heart's action; and by virtue of this operation, when the circulation is proportionately more active than the respiration, it restores an equilibrium of action. It is particularly useful in diseases of the lungs and bronchial membrane. In pneumonitis, catarrh, croup, and other diseases of the respiratory organs, its alterative operation promotes healthy secretion, produces resolution, and thus aids the respiratory function, by improving the condition of the lungs, while its narcotic operation tends still further to equalize the respiratory and circulating functions by depressing the action of the heart. In such cases, when the skin is livid, the cerebral powers are oppressed, and other symptoms of imperfect arterialization are manifest, its favorable operation relieves the cerebral symptoms, and gives a florid hue to the skin. As an operation consequent to these effects, the *oppressed pulse*, which is common in such cases, often becomes more frequent, full and strong—an effect, which probably has occasioned the common, but erroneous opinion, that sanguinaria operates directly to stimulate the action of the heart.

In very large doses, sanguinaria, like most other narcotics, produces torpor of the brain and respiratory nerves, with infrequent, slow, and stertorous breathing, and its consequences, the ordinary symptoms of asphyxia.

Colchicum, veratrum, nicotiana tabacum, and lobelia inflata, with general narcotic and alterative powers like sanguinaria, have also a similar operation in diminishing the action of the heart.

Polygala Senega, though destitute of narcotic powers, is similar to sanguinaria in its alterative effects, and in its operation on the heart. The latter operation, probably, is dependent on the *nauseating property* of the remedy—a property which, in several of the articles before enumerated, contributes to diminish the action of the heart.

[To be continued.]

OF THE COW-PARSNIP.

[The writer of the following paper, the reader will perceive, is *eighty-eight years of age*—being, it is presumed, the most aged member of the medical profession in Massachusetts, who pretends to interest himself in the progress of medicine, with the exception of the venerable and well-known author of the American New Dispensatory, Dr. James Thacher, of Plymouth.—Ed.]

To the Editor of the Boston Medical and Surgical Journal.

Dear Sir,—It is said that the late Dr. Orne, of Salem, in 1808, brought cow-parsnip into notice for the cure of the epilepsy. Until

lately I have supposed that he used the roots of the same plant of which I have used the seeds before and since that time, successfully, for the epilepsy, and have known of its being used for that purpose in the years 1759 and 1773, with success.

Noticing the article cow-parsnip in Dr. Thacher's Dispensatory, I found that he had described the (imperatoria) masterwort of the old dispensatories, formerly esteemed a powerful anti-hysteric. And as it was not the cow-parsnip I had ever used, I sought for information, saying to Dr. Thacher that if Dr. Orne used the article he had described for cow-parsnip and which I called masterwort, there were two plants for the cure of the epilepsy, and that it ought to be ascertained. The doctor writes me that the large umbelliferous plant, found wild by hedges and ditches, with its large jagged leaves, woolly underside, growing four feet high, &c., and avoided by cattle, which he had described, he considers to be undoubtedly the article Dr. Orne used, and that Dr. Bigelow, a late author, calls the same article cow-parsnip.

As the plant Dr. Orne used and Dr. Bigelow calls cow-parsnip is not the same plant which I have used and known to be used long ago, as aforesaid, for the epilepsy, and I have known to be called by the name of cow-parsnip, and no other name, by five successive generations of the inhabitants of Hatfield, I will endeavor so to describe it as that it may be known and identified. It is a tender plant, of which animals are so fond as eagerly to devour it, and sheep even the bulb of the root; therefore rarely found except in dry fields enclosed for mowing. In May, as the flowers of the dandelions are decaying, and before the yellow flowers of the crowfoot much appear, the seed stalks of what I call cow-parsnip, may be seen in said mow-fields (if any there), standing five or six inches high, generally in a cluster of leaves, with their yellow flowers on umbels (in form of caraway), and rising to 2 or 2½ feet high before the seeds are ripe, which is early in August; they resemble aniseed. The leaves are smooth and of a grass-green hue, resembling young angelica leaves, and are on foot-stalks several inches long, rising direct from the roots, which are like parsley roots, but not so large. The seeds are the most efficacious part, finely powdered, and taken in substance in simple syrup. I esteem them as a mild durable stimulant, carminative, stomachic, antispasmodic, and a remedy rarely failing to cure the epilepsy in cases under the age of puberty, but in no case above that age to my knowledge; yet in some it will mitigate the distressing symptoms. Also I have given them as a lactescent to laborious wet nurses, to increase the quantity and improve the quality of their milk, and cause their babes to be quiet and thrifty.

In the year 1759 I was 8 years old, and my brother John 4 years old, who was taken with epileptic fits; the case thought to be incurable by Dr. Samuel Mather, of Northampton, and Dr. Thomas Williams, of Deerfield, eminent physicians in their day; and a Dr. Bartlet, of Connecticut (of Middletown, I think), was sent for, came, and gave medicine, of which cow-parsnip seeds were most depended on. He was cured, lived till December, 1834, and never had another fit.

In 1771 I came to live with Dr. Sergeant, of Stockbridge, and in 1773,

a daughter, seven years old, of Mr. C. Stone, who had moved from Guilford, was taken with epileptic fits. After a short time Mr. Stone, as he wished, and with Dr. Sergeant's consent, went and brought the said Dr. Bartlet, who lodged with us; he was a gentleman in manners, had no nostrum, was communicative. He was waited upon by Dr. Sergeant, as necessary, made his prescriptions for the patient, of which cow-parsnip was mostly depended on, and she was cured.

After this, at a visit to my parents at Hatfield, I well recollected my brother's having fits, and my pounding the cow-parsnip seeds for him. I asked my mother (who was acquainted with many medicines) whether she knew what Dr. Bartlet directed for brother John in 1759. She answered yes, and that he first cleared the stomach and bowels, but not with drastic medicines, and then gave alteratively Æthiops mineral morning and evening, and antimonial wine twice daily a while, and purged again, and then cow-parsnip seeds morning and evening, continuing the wine once or twice a day some longer, but not so long as the seeds; during the time of using the seeds, once in a week or less, to keep the body soluble and free of flatulences, gave of a carminative laxative made with senna, rhubarb, a plenty of carminative seeds, some guaiacum shavings, and a great plenty of raisins stoned, boiled q. s. in equal parts of water and proof spirits, in a covered vessel, and strained by expression, &c.

The above I have considered Dr. Bartlet's method of practice. I impute to the use of said seeds the relief of numbers afflicted with the epilepsy, under my observation, and one with chorea, the only case in which it was used.

For mentioning it as a lactescent, I claim no merit; for when a small boy I heard a good farmer say that some of his hay was so well filled with cow-parsnip that he esteemed it for a milch cow equal to as much of his other best hay and two quarts of corn-meal per day. I did not forget it. Females in common health, yet too feeble for the house-work they performed, have told me that nothing seemed to recover them from fatigue so thoroughly as a few doses of the cow-parsnip seeds. If the seed is powdered very fine (as is proper for use), it ought to be kept in a phial, for if enclosed in a paper, a while after the paper may be saturated with oil and the seed of less value.

Perhaps it is not more than 20 years since said plant was first seen in Berkshire meadows; it evidently increases; but is mowed here too early, in general, to have the seeds ripen.

I am respectfully yours, &c.

Stockbridge, May 22d, 1838. OLIVER PARTRIDGE.

BOSTON MEDICAL AND SURGICAL JOURNAL.

BOSTON, JUNE 6, 1838.

ANNUAL MEETING OF THE MASS. MEDICAL SOCIETY.

On Wednesday last, according to custom, the Massachusetts Medical Society held an anniversary meeting at the Athenæum in Boston. It

was, on the whole, one of the most pleasant and decidedly agreeable meetings we have had for many years. Whatever related to business was done in good time, and to the mutual satisfaction of all the members. At 1 o'clock, Ebenezer Alden, M.D., of Randolph, delivered an address on the objects and utility of the Society, in which he embodied an exact history of all its operations from a small beginning to the present moment, when its influence is felt to be of great importance to the community. Dr. Alden fully met the expectations of the audience, and acquitted himself with honor. Whenever the discourse is published in the documents preparing by the Secretary, an analysis of it may be expected in the Journal. *Two hundred and thirteen*, the number of medical gentlemen present, dined together in Faneuil Hall in the afternoon. Our recollections of that particular part of the anniversary are of a very happy character.

It may be well to remark, that with the exception of a few additional counsellors, on account of an increase of population in some of the districts, the entire board consists of the same gentlemen who composed it the last year. In the second medical department, Drs. Geo. Choate, Geo. Osborn and Ebenezer Hunt were added; in the third, Dr. N. Cutter; and in the Worcester district, Drs. Butler, of Worcester, Stone, of Hardwick, and Kendall, of Sterling. The following is a list of the counsellors.

Counsellors.—*First Department.*—Drs. J. Jackson, B. Shurtleff, J. C. Warren, J. Randall, G. C. Shattuck, W. Channing, J. Bigelow, Geo. Hayward, Enoch Hale, S. D. Townsend, J. Ware, Z. B. Adams, D. Osgood, E. Reynolds, J. Homans, W. Strong, J. Jeffries, G. B. Doane, W. Lewis, G. W. Otis, S. Morrill, J. V. C. Smith.

Second Department.—Joseph Kittredge, Jeremiah Spofford, Abel L. Peirson, Andrew Nichols, Edward L. Coffin, Samuel Johnson, Richard S. Spofford, Calvin Briggs, Dean Robinson, Jonathan C. Johnson, Edward A. Holyoke, Wyatt C. Boyden, Rufus Longley, Geo. Choate, Geo. Osborn, Ebenezer Hunt.

Third Department.—Thomas Bucklin, John Walton, Abraham R. Thompson, Timothy Wellington, Zadoc Howe, William J. Walker, John C. Dalton, Josiah Bartlett, Daniel Swan, John O. Green, Joshua Green, Elisha Bartlett, Anson Hooker, N. Cutter.

Fourth Department.—Stephen Batchelder, John Green, Edward Flint, Benj. F. Heywood, Charles W. Wilder, Amos Parker, George Willard, John Starkweather, J. G. Metcalf, J. S. Butler, J. Stone, P. T. Kendall.

Fifth Department.—Joseph H. Flint, Alpheus F. Stone, Stephen W. Williams, Eli Hall, Elisha Mather, Bela B. Jones, David Bemis.

Sixth Department.—Henry H. Childs, William H. Tyler, Asa G. Welch, Royal Fowler, Robert Worthington, Alfred Perry, Hubbard Bartlett.

Seventh Department.—Nathaniel Miller, John Bartlett, Samuel Bugbee, Robert Thaxter, Jeremy Stimson, Rufus Wyman, Ebenezer Alden, Noah Fyefield.

Eighth Department.—Hector Orr, Nathan Hayward, Ezekiel Thaxter, Paul L. Nichols, Noah Whitman, William Gordon.

Ninth Department.—Alexander Reed, William C. Whittredge, Andrew Mackie, Caleb Swan, Menzies R. Randall, William A. Gordon.

Tenth Department.—Joseph Sampson, Aaron Cornish, Paul Swift, Henry Tuck.

Censors for the *First Medical District*, and for the Society at large.—

William J. Walker, Abel L. Peirson, John Ware, Edward Reynolds, Jr., Woodbridge Strong.

Second Medical District.—John Green, Benjamin F. Heywood, Charles W. Wilder, Benjamin Pond, William Workman.

Third Medical District.—Stephen W. Williams, Elisha Mather, Atherton Clark, Bela B. Jones, David Bemis.

Fourth Medical District.—Henry H. Childs, William H. Tyler, Alfred Perry, Asa G. Welch, Charles Worthington.

The following officers were elected, on the following day, by the counsellors, viz. :—

George Cheyne Shattuck, M.D., of Boston, *President*; Nathaniel Miller, M.D., of Franklin, *Vice President*; John Homans, M.D., of Boston, *Corresponding Secretary*; Solomon D. Townsend, M.D., of Boston, *Recording Secretary*; Walter Channing, M.D., of Boston, *Treasurer*; George W. Otis, Jr., M.D., of Boston, *Librarian*.

Enoch Hale, M.D., of Boston, was appointed orator for 1839.

Committee on Publications.—Enoch Hale, John Ware, John Homans.

Committee on Resignations.—Walter Channing, Zabdiel B. Adams, John Jeffries.

Dr. Alphonso Brooks, of Princeton; Dr. James M. Smith, of Westfield; Dr. Delano Peirce, of Grafton; Dr. Robert Capen, of Plymouth; and Dr. Erastus Robinson, of Northborough, were elected fellows. Dr. Placido Portal, of Palermo, Sicily, was chosen an honorary member.

Thus, in a compact manner, we have endeavored to record the transactions of the Society. It numbers, in the catalogue, not far from five hundred members in this Commonwealth alone, and long may they live, the promoters of the public health and human happiness.

Operation for the Restoration of the Lower Lip.—A young man belonging to Warren, R. I., while on a whaling voyage, in the month of December last, being in an open boat, was struck by a whale in such a manner as to force an oar against his face with sufficient violence to carry away a portion of the anterior surface of the superior maxillary bone, and, worse still, the largest part of the under lip. In this unsightly and truly melancholy condition he returned from the voyage. On presenting himself for advice to Dr. Lewis, of this city, he exhibited the following spectacle. Although the wound, in a measure, had healed, no liquid could be retained in the mouth without covering the void, formerly controlled by the under lip, with one hand, closely pressed against the uneven and exposed dental wall. Besides these formidable difficulties, in consequence of the rent made in bones of the roof of the mouth, his articulation was imperfect. The saliva, unless it was controlled by a handkerchief, was constantly drivelling over the chin. Under these circumstances Dr. Lewis operated on Monday, the 21st ult., with a view, primarily, of remedying the deformity. The process was essentially similar to the common operation for hare lip—the wound being dressed after the admirable method of Dr. Walker, of Charlestown, whose success in such cases is well known in this community. Fortunately, the wound healed by the first intention, and the patient, to his great gratification, is relieved from the manifold inconveniences to which he was subjected for the want of a lip. An artificial palate is to be made for him by Dr. Harwood, next week, which will undoubtedly enable him to converse again in his accustomed tone of voice.

This is another specimen of the skill and exhaustless ingenuity of the surgeons of Boston.

Nature, Treatment, and Diseases of the Ear.—Messrs. Marsh & Capen will accept our thanks for a copy of this excellent work, just from the press of Thomas, Cowperwaith & Co., Philadelphia, by Dr. Kramer, of Berlin. The profession will find it a valuable treatise, concisely arranged, and economical in price. On its first appearance in Dr. Dunglison's Journal we were gratified, and since it has assumed the form of a distinct book no physician should be without it.

Leeches.—Mr. Editor: The difficulty of procuring leeches in our city for the last three months, justifies the tone of your allusion to their scarcity in the last No. of your Journal. I have the pleasure to inform you that Mr. Seth W. Fowles, corner of Salem and Prince streets, has made such arrangements at the South and abroad as to be able to furnish any quantity of leeches to physicians and apothecaries, at a slight advance on the cost of importation. A splendid lot of Swedish leeches have just been received. MEDICUS.

Albany Medical College.—At a meeting of the Trustees of the Albany Medical College, held on the 16th ult., the following gentlemen were appointed professors, viz.: Of surgery, Alden March, M.D.; of chemistry and natural history, E. Emmons; of anatomy and physiology, James H. Armsby, M.D.; of obstetrics and diseases of women and children, Henry Green, M.D.; of materia medica and pharmacy, D. McLachlan, M.D.; of medical jurisprudence, Amos Dean, Esq. The department of theory and practice of medicine remains to be filled.

Tumors in the Axillæ producing Milk.—A woman, 21 years of age, when at the eighth month of her second pregnancy, remarked, for the first time, a tumor in each axilla. The tumors quickly enlarged, and soon reached the size of a hen's egg. They were insensible, and, when handled, gave the sensation of a hardened, knotty mass; when pressed between the fingers, they gave issue to a whitish fluid. The woman was delivered on the 16th of November; the milk fever set in on the third day after delivery, and the axillary tumors now became more enlarged, and discharged, for the space of eight days, a very considerable quantity of white fluid, resembling milk. After this period the secretion gradually declined, the size of the tumors diminished, and when the relator of the case (Dr. Siebold) lost sight of the patient, the tumor had nearly totally disappeared. In addition to this case, Dr. Siebold relates two other instances of the secretion of milk from supernumerary nipples placed three or four inches below the normal ones.—*Berlin Gazette.*

Bandage for the Cure of Prolapsus Uteri.—Dr. Robert Thompson, of Columbus, Ohio, has invented an apparatus for the cure or palliation of *prolapsus uteri*, which we have not had an opportunity of testing, but which seems well in appearance; and, in his own practice, we are told, has answered every desirable end. It makes firm pressure around the pelvis, holds up the abdominal viscera, and supports the perinæum and vulva.—*Western Med. Jour.*

To Correspondents.—W.'s interesting account of the Insane Hospitals of the United States, will have an insertion as soon as the present crowded state of our pages will permit.

Died,—Near Middletown, in Frederick Co., Va., Dr. Samuel Atwil Miller, aged 33.

Whole number of deaths in Boston for the week ending June 2d, 27. Males, 13—Females, 14.

Consumption, 4—infantile, 5—dropsy on the brain, 1—erysipelas, 1—croup, 2—marasmus, 2—disease of the brain, 1—dropsy, 2—burn, 1—accidental, 1—disease of the heart, 1—inflammation of the lungs, 1—lung fever, 1—smallpox, 1—disease of the womb, 1—stillborn, 2.

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